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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/196,013 11/19/98 KOMA

N 5586D-7076

EXAMINER

NGUYEN, F

ART UNIT

PAPER NUMBER

2674

DATE MAILED:

12/20/00

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WM01/1220

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/196,093

Applicant(s)

NORIO KOMA

Examiner
FRANCIS NGUYEN

Group Art Unit
2674



- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

- ☒ Claim(s) 1-8 _____ is/are pending in the applicat
- Of the above, claim(s) _____ is/are withdrawn from consideration
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-8 _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on Nov 19, 1998 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☒ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2674

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation "separately subjected gamma correction" must be shown or the feature(s) canceled from the claim(s) 3 and 7. No new matter should be entered.

Claim Objections

2. Claims 1, 3, 5 and 7 are objected to because of the following informalities: incorrect word "components" (page 30, claim 1, line 6, claim 3, line 6, claim 5, line 7, claim 7, line 6. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-2, 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by McKnight (U.S. Patent 6,144,353).

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5. As to **claims 1-2**, McKnight discloses a liquid crystal display(**LCD system 12**, column 8, lines 48-51) having liquid crystal sandwiched by a pair of substrates (**electro-optic layer 22**, figure 1A, column 3, line 61) having electrodes (**pixel electrode 28** and **common electrode 26**, column 8, lines 56-64) for driving the liquid crystal based on a liquid crystal control driving signal for R light , a liquid crystal control driving signal for G light, and a liquid crystal control driving signal for B light (figure 2C, **three different driving waveforms 154/155/156**) to control transmittance of R light component, G light component, and B light component for color display, a driving voltage for application to the liquid crystal being set independently for R display , G display, and B display(display of **first color subframe, second color subframe** and **third color subframe**, figures 3A and 3B) . Note **figure 2C** indicates the upper range of driving voltage for R/G/B display at t2, t4 and t6, and control voltages of common electrode Vcg, also overdrive voltage (column 9, lines 62-63).
6. As to **claims 5 and 6**, note the same citations for claims 1 and 2.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKnight in view of Sawada (U.S. Patent 6,078,317).

9. As to **claims 3 and 7**, McKnight fails to teach gamma correction. Sawada discloses gamma characteristic adjustment circuit 19(figure 1, column 6, lines 63-65) for LCD display. **It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of McKnight then add a gamma adjustment circuitry, as taught by Sawada, to obtain the combined apparatus McKnight-Sawada , because it would result in proper luminance on LCD display.**

10. As to **claims 4 and 8**, McKnight-Sawada does not expressly teach poly-Si TFT. However, fabrication and application to Active Matrix LCD is well known in the art at the time of the invention. **It would have been obvious to a person of ordinary skill in the art to make use of poly-Si TFT as switching elements in the apparatus of McKnight-Sawada because it would result in increased aperture ratio, production yield and increase of pixel density in LCD display.**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,640,259 Sawayama et al.

U.S. Patent No. 5,153,702 Aoyama et al.

The reference Sawayama et al. is made of record as it discloses a liquid crystal device with an upper limit value for the driving voltage.

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The reference Aoyama et al. is made of record as it discloses a poly-Si thin film transistor and application in an active matrix LCD.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis Nguyen whose telephone number is (703) 308-8858. The examiner can normally be reached on weekdays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Group is (703) 308-9051.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.



Francis Nguyen

December 11th, 2000



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600